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L1        176779 S DENDRITIC
L2           194 S PDC2
L3            77 S L1 AND L2
L4             9 S L3 AND (HIV? OR AIDS)
L5             3 DUP REM L4 (6 DUPLICATES REMOVED)
L6             3 SORT L5 PY
L7            40 S L2 AND (CD4? OR CD3? OR CD11C?)
L8            18 DUP REM L7 (22 DUPLICATES REMOVED)
L9             2 S L8 AND PY<=1999
                E SHODELL MICHAEL?/AU
L10           16 S E2
                E SHIEGAL FREDERICK?/AU
                E SIEGAL FREDERICK?/AU
L11           42 S E1
L12            1 S E2
L13           43 S L11 OR L12
L14           44 S L10 OR L13
L15           29 DUP REM L14 (15 DUPLICATES REMOVED)
L16            0 S L15 AND L2
L17            7 S L15 AND L1
L18            5 S L17 AND (HIV? OR AIDS)
L19            5 SORT L18 PY
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=> d ti so au ab l19 3-5

L19 ANSWER 3 OF 5 MEDLINE on STN

TI **Dendritic** cell numbers in the blood of **HIV**-1 infected patients before and after changes in antiretroviral therapy.

SO Journal of clinical immunology, (2004 Nov) 24 (6) 647-52.
Journal code: 8102137. ISSN: 0271-9142.

AU Finke Jennifer S; **Shodell Michael**; Shah Kokila; **Siegal Frederick P**; Steinman Ralph M

AB Antigen presenting **dendritic** cells (DCs) can serve as sites for **HIV** replication and as vehicles for transmission of the virus to T cells. It is known that the numbers of DCs in blood is reduced during **HIV**-1 infection. Here we monitored the two major subsets of blood DCs in 12 individuals undergoing a change, primarily initiation, of highly active antiretroviral therapy. The numbers of plasmacytoid DCs were reliably higher on therapy, although in the 1-3 month interval we followed, these numbers did not return to those seen in **HIV** uninfected controls. An increase in plasmacytoid DCs was accompanied by an increase in IFN-alpha production in response to a standard challenge in culture with UV-inactivated herpes simplex virus. The levels of myeloid DCs also demonstrated an increase while on HAART, and these numbers become comparable to the **HIV** uninfected controls. The numbers of plasmacytoid and myeloid DCs varied inversely with the levels of plasma **HIV** viremia. These longitudinal studies extend prior work showing that virus infection with **HIV** leads to a decrease in the number of **dendritic** cells in blood, and that this can be reversed at least in part by therapy.

L19 ANSWER 4 OF 5 MEDLINE on STN

TI **HIV**-1-infected monocyte-derived **dendritic** cells do not undergo maturation but can elicit IL-10 production and T cell regulation.

SO Proceedings of the National Academy of Sciences of the United States of America, (2004 May 18) 101 (20) 7669-74. Electronic Publication: 2004-05-05.
Journal code: 7505876. ISSN: 0027-8424.

AU Granelli-Piperno Angela; Golebiowska Angelika; Trumpfheller Christine; **Siegal Frederick P**; Steinman Ralph M

AB **Dendritic** cells (DCs) undergo maturation during virus infection and thereby become potent stimulators of cell-mediated immunity. **HIV**-1 replicates in immature DCs, but we now find that infection is not accompanied by many components of maturation in either infected cells or uninfected bystanders. The infected cultures do not develop potent stimulating activity for the mixed leukocyte reaction (MLR), and the DCs producing **HIV**-1 gag p24 do not express CD83 and DC-lysosome-associated membrane protein maturation markers. If different maturation stimuli are applied to DCs infected with **HIV**-1, the infected cells selectively fail to mature. When DCs from **HIV** -1-infected patients are infected and cultured with autologous T cells, IL-10 was produced in 6 of 10 patients. These DC-T cell cocultures could suppress another immune response, the MLR. The regulation was partially IL-10-dependent and correlated in extent with the level of IL-10 produced. Suppressor cells only developed from infected patients, rather than healthy controls, and the DCs had to be exposed to live virus rather than **HIV**-1 gag peptides or protein. These results indicate that **HIV**-1-infected DCs have two previously unrecognized means to evade immune responses: maturation can be blocked reducing the efficacy of antigen presentation from infected cells, and T cell-dependent suppression can be induced.

L19 ANSWER 5 OF 5 MEDLINE on STN

TI CD8+ T cells from most **HIV**-1-infected patients, even when challenged with mature **dendritic** cells, lack functional recall memory to **HIV** gag but not other viruses.

SO European journal of immunology, (2005 Jan) 35 (1) 159-70. Journal code: 1273201. ISSN: 0014-2980.

AU Arrode Geraldine; Finke Jennifer S; Zebroski Henry; **Siegal Frederick P**; Steinman Ralph M

AB Chronically **HIV**-1-infected patients fail to contain their viremia despite high frequencies of **HIV**-1-specific, IFN-gamma-producing CD8(+) T cells. However, these cells are known to exhibit both phenotypic and functional defects. We tested if mature **dendritic** cells (DC) could correct defective **HIV**-1 gag-specific T cell responses and if responses to other viral antigens were comparably affected. The circulating gag-specific CD8(+) T cells in fresh blood reliably produced IFN-gamma but lacked IL-2 and high perforin levels and failed to expand significantly during culture with mature DC presenting **HIV**-1 gag peptides. In contrast, CD8(+) T cells from long-term nonprogressors contained gag-specific IFN-gamma and IL-2 double producers, and the numbers of IFN-gamma producers expanded approximately 15-fold during culture with DC. DC from chronically infected patients could expand IFN-gamma- and IL-2-producing cells specific for influenza, cytomegalovirus and Epstein Barr virus, and the expansions were comparable to those in healthy donors. When the proliferative capacity of CD8(+) T cells from progressor patients was assessed by CFSE dilution, proliferation to other viral antigens was more vigorous than to **HIV**-1 gag. Therefore, monocyte-derived DC from **HIV** patients present viral antigens effectively, but there is a selective inability to expand CD8(+) IFN-gamma-producing and IFN-gamma and IL-2 double-producing T cells when challenged with **HIV**-1 gag.

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	10/067146	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:34
L2	5	Siegal SAME shodell	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:34
L3	0	Siegal NEAR frederick	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:35
L4	0	Shodell NEAR michael	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:35
L5	140	pdc2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:44
L6	666	interferon producing cell	USPAT; DERWENT	SAME	OFF	2006/02/09 16:38
L7	11047	dendritic cell	US-PGPUB; USPAT; EPO; JPO; DERWENT	NEAR	ON	2006/02/09 16:46
L8	823791	HIv aids	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:39
L9	84	l5 and l7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:39
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L11	4	l10 and l6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:39
L12	7	pdc2.clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:42
L13	7339	l7 and l8	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:49
L14	152	(l7 and l8).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:43

L15	2	pdc2 CD4$2 cd3$2 cd11c$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2006/02/09 16:45
L16	87	(HIv OR aids) CD4$2 cd3$2 cd11c$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	SAME	ON	2006/02/09 16:47
L18	17	l16 AND dendritic cell	US-PGPUB; USPAT; EPO; JPO; DERWENT	NEAR	ON	2006/02/09 16:46
L20	14	(HIv OR aids) CD4$2 cd3$2 cd11c$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2006/02/09 16:57
L21	152	(l7 and l8).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:55
L22	1	l21 and pdc2	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/02/09 16:56
L23	169	precursor type dendritic cells	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2006/02/09 16:57
L24	138	l23 and (aids or hiv)	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2006/02/09 16:57
L25	8	l24 AND CD4$2 cd3$2 cd11c$3	US-PGPUB; USPAT; EPO; JPO; DERWENT	WITH	ON	2006/02/09 16:58

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Variations in Plasmacytoid Dendritic Cell (PDC) and Myeloid Dendritic Cell (MDC) Levels in HIV-Infected Subjects on and off Antiretroviral Therapy.
J Clin Immunol. 2006 Jan;26(1):55-64.
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2: Smed-Sorensen A, Lore K, Vasudevan J, Louder MK, Andersson J, Mascola JR, Spetz AL, Koup RA. Related Articles, Links

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4: Siegal F. Related Articles, Links

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Immunologic profile of highly exposed yet HIV type 1-seronegative men.
AIDS Res Hum Retroviruses. 2002 Sep 20;18(14):1051-65.
PMID: 12396457 [PubMed - indexed for MEDLINE]

6: Chehimi J, Campbell DE, Azzoni L, Bacheller D, Papasavvas E, Jerandi G, Mounzer K, Kostman J, Trinchieri G, Montaner LJ. Related Articles, Links

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☐8: Siegal FP, Fitzgerald-Bocarsly P, Holland BK, Shodell M. Related Articles, Links

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☐9: Shodell M, Siegal FP. Related Articles, Links

Corticosteroids depress IFN-alpha-producing plasmacytoid dendritic cells in human blood.
J Allergy Clin Immunol. 2001 Sep;108(3):446-8.
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☐10: Siegal FP, Kadowaki N, Shodell M, Fitzgerald-Bocarsly PA, Shah K, Ho S, Antonenko S, Liu YJ. Related Articles, Links

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Science. 1999 Jun 11;284(5421):1835-7.
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☐11: Sapp M, Engelmayer J, Larsson M, Granelli-Piperno A, Steinman R, Bhardwaj N. Related Articles, Links

Dendritic cells generated from blood monocytes of HIV-1 patients are not infected and act as competent antigen presenting cells eliciting potent T-cell responses.
Immunol Lett. 1999 Mar;66(1-3):121-8.
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